

Amendments to the Specification:

Please substitute the paragraph starting at page 2, line 23 and ending at page 3, line 3 with the following replacement paragraph.

--Two types of charging mechanisms are intermingled in the charging mechanism (charging principle) of the contact charging member, which are (1) a discharge charging mechanism and (2) a direct-injection charging mechanism. Their characteristics are brought out depending on which mechanism is predominant. Fig. 4 shows their typical charging characteristics. Details are as follows:--

Please substitute the paragraph starting at page 4, line 13 and ending at page 4, line 24 with the following replacement paragraph.

--More To describe more specifically, when a charging roller is brought into pressure contact with an OPC (organic photoconductor) photosensitive member with a layer thickness of 25 μm as the charging object member, the surface potential of the photosensitive member begins to rise upon application of a voltage of about 640 V or above, and at voltages higher than such threshold value the photosensitive member surface potential linearly increases at a slope of 1 with respect to the applied voltage. This threshold value voltage is defined as charging start voltage V_{th} (the dotted line in Fig. 4).--

Please substitute the paragraph starting at page 9, line 16 and ending at page 10, line 1 with the following replacement paragraph.

--In the above-described above roller charging and fur brush charging, in many cases the transfer residual toner on the photosensitive member is made to spread to

become unpatterned and also a great bias is applied to utilize the charging caused by discharge. In the magnetic brush charging, a powder is used as the contact charging member, and hence there is such an advantage that the magnetic brush part formed of the powder conductive magnetic particles softly comes into contact with the photosensitive member to electrostatically charge the photosensitive member. However, it requires a complicated assemblage, and the conductive magnetic particles forming the magnetic brush tends to come off.--

Please substitute the paragraphs starting at page 14, line 2 and ending at page 14, line 17 with the following replacement paragraphs.

--the charging member having a surface roughness R_a in a range of from 1 μm to 500 μm ;

the charging object member having a surface with a contact angle to water in a range of from 86° to 103°;

wherein the magnetic one-component developer includes 100 parts by weight of comprising a magnetic toner having at least a binder resin and a magnetic material and 0.01 ~ 20 parts by weight of conductive particles, and

wherein the magnetic one-component developer has having an average circularity of 0.950 or more as determined from the following equations:

Equation (1)

Circularity (C_i) = Circumferential length of a circle with the same area as projected particle image and
Circumferential length of projected particle image

Equation (2)

*4
Cont'd*

$$\text{Average circularity } (\bar{C}) = \frac{m}{\sum_{i=1}^n Ci/m}$$

where m represents the number of all particles measured to define the average circularity, and

wherein no cleaning unit is present between a downstream side of the transfer charging assembly and an upstream side of the charging assembly.--

Please substitute the paragraphs starting at page 16, line 8 and ending at page 16, line 24 with the following replacement paragraphs.

--the charging member having a surface roughness Ra in a range of from 1 μm to 500 μm ;

(P5)
(C2)

the charging object member having a surface with a contact angle to water in a range of from 86° to 103°;

wherein the magnetic one-component developer includes 100 parts by weight of comprising a magnetic toner having at least a binder resin and a magnetic material and 0.01 ~ 20 parts by weight of conductive particles, and

wherein the magnetic one-component developer has having an average circularity of 0.950 or more as determined from the following equations:

Equation (1)

Circularity (Ci) =
$$\frac{\text{Circumferential length of a circle with the same area as projected particle image}}{\text{Circumferential length of projected particle image}}$$

Equation (2)

$$\text{Average circularity } (\bar{C}) = \frac{m}{\sum_{i=1}^n Ci/m}$$

i=1

where m represents the number of all particles measured to define the average circularity, and

wherein no cleaning unit is present between a downstream side of the transfer charging assembly and an upstream side of the charging assembly.--

Please substitute the paragraph starting at page 17, line 10 and ending at page 17, line 23 with the following replacement paragraph.

--In the image-forming apparatus of the present invention, which does do not have any cleaning unit, the insulating transfer residual toner, which is inhibitory to the injection charging can easily roll into the charging contact zone even when it comes into that zone, and, even when there are some areas having become not chargeable because the transfer residual toner has once been present there, the toner can roll to move and come in contact with other normal contact areas, and also the charging member surface comes into contact at its other fresh areas according to its rotation. Hence, good charging performance preformance can be achieved. Thus, uniform charging can be accomplished even in an ozoneless and cleanerless apparatus.--

Please substitute the paragraph starting at page 19, line 14 and ending at page 20, line 8 with the following replacement paragraph.

--The charging unit of this example is, as shown in Fig. 1, constituted chiefly of a conductive elastic roller 21 (hereinafter "charging roller") and conductive particles 22 intended for the acceleration of charging (hereinafter "charging accelerator

particles"). The surface of the charging roller 21 is are previously coated with the charging accelerator particles in the manner described later. The photosensitive drum is electrostatically charged in the state the charging roller holds the charging accelerator particles thereon. Also, the charging accelerator particles are interposed between the charging roller and the photosensitive drum so that a velocity differential can be provided between ~~the~~ both. Hence, a high contact performance can be achieved by providing such velocity differential. As for the construction, the charging roller may rotatingly be driven to provide the velocity differential between the photosensitive drum and the charging roller. The charging roller may preferably be so constructed that its rotational direction B is opposite to the movement direction A of the photosensitive drum surface.--

Please substitute the paragraph starting at page 20, line 19 and ending at page 20, line 27 with the following replacement paragraph.

--The velocity differential between the photosensitive drum and the charging roller may preferably be from -101 % to -400 %. If the velocity differential is smaller than -101 %, the contact performance necessary for charging may be insufficient. If it is greater than -400 %, the rubbing friction with the photosensitive drum may occur so frequently that the photosensitive drum surface may wear causing a to be shortened in its lifetime.--

Please substitute the paragraph starting at page 21, line 14 and ending at page 22, line 3 with the following replacement paragraph.

--Roller resistance of this example was measured to find that it was 100 k Ω .

To measure roller resistance it, in a state that the roller 21 is pressed against an aluminum drum of 30 mm in diameter so that a load of 9.8 N (1 kg) in total pressure is applied to its mandrel, a voltage of 100 V is applied to the mandrel 2b and the aluminum drum. Here, it is important for the charging roller 21 to function as an electrode. It is necessary for the roller to be endowed with an elasticity to provide a sufficient state of contact and at the same time to have an electrical resistance low enough to charge the moving charging object member. Meanwhile, any leak of voltage must be prevented when any defects such as pinholes are present in the charging object member. Hence, the roller may preferably have an electrical resistance of from 10^4 to 10^7 Ω in order to attain a sufficient charging performance and be anti-leaking--

Please substitute the paragraph starting at page 24, line 27 and ending at page 25, line 6 with the following replacement paragraph.

--The conductive particles not only may be present in the state of primary particles, but also may be present in the state of agglomerates of secondary particles without any problem. In whatever state of agglomeration, the form of the particles is not important as long as the agglomerates themselves can function as conductive particles.--

Please substitute the paragraph starting at page 30, line 14 and ending at page 31, line 8 with the following replacement paragraph.

--However, where a usual magnetic material is incorporated in the polymerization magnetic toner particles, it is difficult to keep the magnetic material from

being laid bare out of the surfaces of the magnetic toner particles. In addition, not only because of a lowering of fluidity and charging performance of the magnetic toner particles, but also because of a strong interaction between the magnetic material and the water when the magnetic toner is produced by suspension polymerization, the magnetic toner having the average circularity of 0.950 or more may be hard to obtain. This is presumed to be due to the fact that (1) the particles of the magnetic material are commonly hydrophilic and hence tend to be present at the magnetic-toner particle surfaces, and (2) the magnetic material moves disorderedly when the aqueous medium is stirred and the surfaces of suspended particles comprised of monomers are dragged thereto, so that their shapes are distorted and are hard to make round. In order to solve such problems, it is important to modify the surface properties of the particles of the magnetic material have.--
